THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An assay system for grading a substance so as to assess, in a standardized manner, its anti-inflammatory activity, said assay system comprising:

(i) injection of a suitable antigen into an appropriate body part of a mammal;

(ii) either injection of a predetermined amount of said test substance into the same body part, or topical application to said mammal of a predetermined amount of said substance;

(iii) measurement of the degree to which swelling which would otherwise result from injection of said antigen is reduced or alleviated; and

(iv) comparing the activity of said test substance, as measured in step (iii), against the activity of a standard compound having known anti-inflammatory characteristics, the activity of said standard compound having been measured by this same assay system of steps (i) to (iii), and having been used to generate a grading system to compare the efficacy of various of the assessed substances.

2. An assay system for grading a substance so as to assess, in a standardized manner, its anti-inflammatory activity, said assay system comprising:

(i) measurement of the activity of an *in vitro* preparation of T-cells, macrophages or neutrophils, or a cell line derived therefrom;

(ii) addition of said substance to said preparation of T-cells, macrophages or neutrophils, or said cell line derived therefrom;

(iii) measurement of the change in activity of said preparation of T-cells, macrophages or neutrophils, or said cell line derived therefrom, following addition of said substance in step (ii); and

(iv) comparing the change in activity (as measured in step (iii)) for said substance against the change in activity for a standard compound having known anti-inflammatory characteristics, the change in activity for the standard compound having been measured by this same assay system of steps (i) to (iii), and having been used to generate a grading system to compare the efficacy of various of the assessed substances.

3. An assay system according to claim 1 or claim 2, wherein said substance is an oil or a fat, an organic solvent extract of an oil or a fat, a preparation comprising an oil or a fat, or a biologically active component of an oil or a fat.

4. An assay system according to claim 3, wherein said substance is selected from the group consisting of animal oils; plant oils, such as tea tree oil, flaxseed oil, linseed oil, borage oil and evening primrose oil; fish oils; and algal, microbial and fungal oils.

5. An assay according to claim 3 or claim 4, wherein said substance is emu oil or an ethanol extract of emu oil.

6. An assay system according to claim 1 wherein, in step (i), said antigen is injected intraperitoneally or into a footpad or ear of said mammal.

7. An assay system according to claim 1 or claim 6, wherein said antigen is Carrageenan or sheep red blood cells.

8. An assay system according to claim 1 wherein, in step (ii), said substance is injected intraperitoneally or applied topically.

9. An assay system according to claim 2, wherein said preparation is a preparation of T lymphocytes and said activity is lymphoproliferation.

10. An assay system according to claim 2, wherein said preparation is a preparation of T lymphocytes and said activity is production of cytokines.

11. An assay system according to claim 10, wherein said cytokines are selected from the group consisting of interleukin-2, tumor necrosis factors and interferon-γ.

12. An assay system according to claim 2, wherein said preparation is a preparation of neutrophils and said activity is chemotaxis.

13. An assay system according to claim 2, wherein said preparation is a preparation of neutrophils and said activity is adherence to endothelial cells.

14. An assay system according to claim 1 or claim 2, wherein steps (i) to (iv) are repeated, using serially reducing amounts of said substance.

15. An assay system according to claim 14, wherein said substance is serially diluted in ethanol.

16. A pharmaceutical composition for treating or ameliorating the symptoms of a T-cell mediated disease or condition or a neutrophil mediated disease or condition in a mammal, said pharmaceutical composition comprising emu oil, or a biologically active extract or component thereof, optionally together with a carrier vehicle.

17. A pharmaceutical composition according to claim 16, wherein the disease or condition is immune complex disease, renal disease, nephritis, arthritis, glomerulitis, vasculitis, gout, urticaria, angioedema, cardiovascular disease, systemic lupus erythematosus, breast pain/premenstrual syndrome, asthma, neurological disease, attention deficit disorder (ADD), psoriasis, retinal disease, acne, sepsis, granulomatosis, inflammation, reperfusion injury, cystic fibrosis, adult respiratory distress syndrome, thermogenesis, diabetes, inflammatory bowel disease, Crohn's disease, multiple sclerosis (MS), systemic sclerosis, osteoarthritis, atopic dermatitis, allergic contact dermatitis, graft rejection (graft versus host disease) or transplantation.

18. A pharmaceutical composition according to claim 16 or claim 17, wherein said biologically active extract or component is selected from the group consisting of triglyceride fractions, triglyceride fraction components, sterol fractions, sterol

fraction components, phenolic fractions, phenolic fraction components, alkali-stable fractions, alkali-stable fraction components, organic solvent extracts, components of organic solvent extracts, and mixtures thereof.

19. A pharmaceutical composition according to any one of claims 16 to 18, being an oral, injectable or topical composition.

20. A pharmaceutical composition according to claim 19, being an injectable composition.

21. A method of treating or ameliorating the symptoms of a T-cell mediated disease or condition or a neutrophil mediated disease or condition in a mammal, said method comprising administration of an effective dose of a composition comprising emu oil, or a biologically active extract or component thereof.

22. A method according to claim 21, wherein the disease or condition is immune complex disease, renal disease, nephritis, arthritis, glomerulitis, vasculitis, gout, urticaria, angioedema, cardiovascular disease, systemic lupus erythematosus, breast pain/premenstrual syndrome, asthma, neurological disease, attention deficit disorder (ADD), psoriasis, retinal disease, acne, sepsis, granulomatosis, inflammation, reperfusion injury, cystic fibrosis, adult respiratory distress syndrome, thermogenesis, diabetes, inflammatory bowel disease, Crohn's disease, multiple sclerosis (MS), systemic sclerosis, osteoarthritis, atopic dermatitis, allergic contact dermatitis, graft rejection (graft versus host disease) or transplantation.

23. A method according to claim 21 or claim 22, wherein said biologically active extract or component is selected from the group consisting of triglyceride fractions, triglyceride fraction components, sterol fractions, sterol fraction components, phenolic fractions, phenolic fraction components, alkali-stable fractions, alkali-stable fraction components, organic solvent extracts, components of organic solvent extracts, and mixtures thereof.

24. A method according to any one of claims 21 to 23, wherein said composition is administered orally, parenterally or topically.

25. A method according to claim 24, wherein said composition is administered by injection.

26. Use of an organic solvent to extract compounds having anti-inflammatory activity from a biologically active oil or fat.

27. The use according to claim 26, wherein said biologically active oil is emu oil.

28. The use according to claim 26 or claim 27, wherein said organic solvent is an alcohol.

29. The use according to claim 28, wherein said alcohol is ethanol.

30. A method of preparing emu oil for therapeutic use, including the step of heating the emu oil, or the tissue from which the emu oil is derived, to a temperature of at least 40°C.

31. A method according to claim 30, wherein said temperature is about 60°C, about 80°C or about 100°C.